Amendments to the Claims:

The listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Cancelled)

2. (Currently Amended) Separator according to claim [[1]] 16, wherein the surface is positioned on a rotating part so as to provide a repeated scan of wavelengths over a predetermined area.

3. (Currently Amended) Separator according to claim [[1]] 16, wherein the surface is drum shaped and being rotatable according to the drum axis.

4. (Currently Amended) Separator according to claim [[1]] 16, wherein the surface is a plane, disc shaped surface.

5. (Currently Amended) Separator according to claim [[1]] 16, wherein the DOE is constituted by a number of focussing DOEs, each for directing the separated colours to selected parts of an imaging device.

6. (Currently Amended) Separator according to claim 5, wherein the focussing DOE's are at least partially overlapping.

7. (Currently Amended) Separator according to claim [[1]] 16, wherein the DOE is adapted to direct both first and second order diffraction toward said imaging device, and that the DOE is provided with a smooth transition between the two when moved along the direction of movement.

8. (Currently Amended) Separator according to claim [[1]] 16, wherein the DOEs are reflective.

9. (Currently Amended) Separator according to claim [[1]] 16, wherein the DOEs are transparent diffracting the light passing through the elements.

10. (Currently Amended) Separator according to claim [[1]] 16, wherein the DOE is constituted by a ~~thick-film~~ holographic element.

11. (Currently Amended) Separator according to claim [[1]] 10, wherein the DOE is constituted by a synthetic surface hologram.

12. (Currently Amended) Separator according to claim [[1]] 16, wherein the DOE is provided on

a flat surface being tilted or rotated relative to a chosen axis for scanning through the diffracted spectrum.

13. (Currently Amended) Use of colour separator according to claim [[1]] 16, in a video projector, said projector comprising a lamp with a chosen spectrum, focussing means for directing light toward a chosen part of the separator, imaging device positioned within said predetermined area and optical system for projecting the image.

14. (Currently Amended) Video projector comprising colours separator according to claim [[1]] 16, also comprising a lamp with a chosen spectrum, focussing means for directing light toward a chosen part of the separator, imaging device positioned within said predetermined area, said imaging device being synchronized with said colour separator for providing an image corresponding to the colour projected on each part of the device, and an optical system for projecting the image.

15. (Original) Use of a video projector according to claim 14 for projecting stereoscopic images, wherein the imaging device is programmed to project two images at different sets of wavelengths, representing stereoscopic images, said sets of wavelengths both corresponding to a full RGB colour spectrum, said images being viewable using two adapted filtering devices, each letting one of said sets of wavelengths through.

16. (New) A colour separator comprising:

a surface adapted to be moved through a light beam, the light beam including a spectrum of different wavelengths and illuminating a part of the surface moving through the light beam,

wherein the surface comprises a diffractive or holographic optical element (DOE) adapted to separate a substantial part of the light beam illuminating the part of the surface into different wavelengths and to direct the separated wavelengths toward a predetermined area,

the separated wavelengths being directed by said DOE towards different parts of the predetermined area and the directions of the separated wavelengths being dependent on the part of the DOE surface being illuminated, and

said DOE generating an essentially continuous repeating colour pattern scanned over said predetermined area as a function of the DOE surface through the light beam.